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Quality of Life and Functioning One Year After Experiencing Accumulated Coercive Events During Psychiatric Admission.

Stephen Shannon
Royal College of Surgeons in Ireland, stshanno@gmail.com

Eric Roche
Cluain Mhuire Mental Health Service, Dublin

Kevin Madigan
Royal College of Surgeons in Ireland, kevinmadigan@rcsi.ie

Laoise Renwick
Department of Health Service and Population Research, London.

Catherine Dolan
Cluain Mhuire Mental Health Service

See next page for additional authors

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Authors
Stephen Shannon, Eric Roche, Kevin Madigan, Laoise Renwick, Catherine Dolan, Patrick Devitt, Larkin Feeney, Kieran C. Murphy, and Brian O'Donoghue

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Corresponding Author

Stephen Shannon

stshanno@gmail.com

Author and Article Information

Mr. Shannon, Dr. Feeney, and Prof. Murphy are with the Department of Psychiatry, and Mr. Madigan is with the Institute of Leadership, Royal College of Surgeons in Ireland, Dublin. Mr. Shannon is also with the Mental Health Commission, Dublin, where Dr. Devitt is affiliated. Dr. Feeney and Mr. Madigan are also with Cluain Mhuire Mental Health Service, where Dr. Roche and Dr. Dolan are affiliated. Dr. Renwick is with the Department of Health Service and Population Research, Institute of Psychiatry, Psychology and Neuroscience, London. Dr. O'Donoghue is with Orygen, the National Centre of Excellence in Youth Mental Health, Melbourne, Victoria, Australia. A poster reporting results of this study was presented at the European Congress on Violence in Clinical Psychiatry, Ghent, Belgium, October 23–26, 2013. An oral presentation of this study was delivered at the European Psychiatric Association's epidemiology and social psychiatry section meeting, Ulm, Germany, May 21–24, 2014. The project was partially funded by a grant from the Mental Health Commission of Ireland. The authors thank the following members of the former SOURCE committee: Ciaran Crummey, Ph.D., Darach Murphy, and Veronica Ranieri, M.A., M.Sc., for data collection and Karen Cobbe for administrative support. Mr. Shannon is undertaking a Ph.D. dissertation on the topic of coercion that is funded by the Mental Health Commission of Ireland. Dr. Feeney occasionally provides independent psychiatric opinion to the Mental Health Commission of Ireland. The authors report no financial relationships with commercial interests.

Abstract

Objectives

To determine: the number of accumulated coercive events during admission and associations, functioning and quality of life one year after discharge and associations and whether accumulated coercive events were related to these outcomes.

Methods

A prospective cohort study at three community services and an independent hospital was undertaken in Ireland. The accumulated coercive events score was based on legal status, perceived coercion and episodes of physical restraint, seclusion or forced medication.

Results

110 (68%) of all 162 participants experienced at least one coercive event. Lower functioning predicted more coercive events. One year after discharge, subjective quality of life was 63% of the highest possible score, objective quality of life improved for 15% and functioning improved for 70% of individuals. Accumulated coercive events did not predict these outcomes.

Conclusions

Coercive events are common during psychiatric admission and appear unrelated to functioning and quality of life one year after discharge.

Introduction

The use of coercion in mental health settings is one of the most controversial practices in medicine (1). Proponents of the practice state that coercion is unfortunately necessary to prevent the deterioration in mental state or ensure the safety of vulnerable people suffering with serious mental health disorders (2). While opponents of coercion describe it as an unjustified deprivation of human liberties and some go as far as describing it as torture (3). Considering the seriousness and prevalence of the practice of coercion, the extent of the research to date on this topic is minimal (4). In part, this may be due to the ethical and practical reasons that make randomised controlled trials on coercion incredibly difficult or unfeasible (5). Despite this, observational cohort studies have provided valuable knowledge by comparing outcomes after different coercive experiences.

While research to date has reported no association between coercion and quality of life (QoL) or functioning during admission (6, 7) other studies have found that coercion during admission can predict prognosis and QoL up to one year after discharge (8, 9). However, most of these studies did not take into account the total amount of coercion experienced by the service user as they compared some types of coercion only. This suggests that focusing on functional and QoL outcomes one year after accumulated coercive events during admission can yield valuable new knowledge.

To investigate this further, we aimed to determine first; the level of accumulated coercive events experienced by individuals during admission and associated characteristics. Second; the level of subjective QoL and change in objective QoL and functioning between admission and one year after discharge and associated characteristics. Third; whether accumulated coercive events are associated with the level of subjective QoL and change in objective QoL and functioning between admission and one year after discharge.

Method

We used an observational prospective cohort design to assess inpatients from three community mental health services and an independent psychiatric hospital that receives national referrals during admission from May 2010 to June 2011 and one year after discharge from May 2011 to August 2012.

In the Republic of Ireland, psychiatric service users fulfilling specific criteria can be detained involuntarily in approved centres under the Mental Health Act, 2001. Voluntarily admitted service users who attempt to leave hospital despite strong concerns regarding either their mental state or safety can be detained in approved centres for up to 24 hours to allow for a mental health examination by two consultant psychiatrists. While physical coercion can be applied to voluntarily admitted service users, their legal admission status is likely to be changed to involuntary.

We excluded service users who were less than 18 years of age or had a learning disability or dementia. As the Mental Health Act prohibits the involuntary admission of individuals who have sole diagnosis of a personality disorder or substance misuse, such individuals were excluded from our study. We excluded individuals with a first episode of psychosis because they were involved in a different study. We selected the next voluntary service user admitted immediately after each involuntary admission to ensure comparable numbers of each.

Each mental health service involved in the study granted ethical approval. We obtained written informed consent from participants to participate in the interviews and access their clinical files. We offered participants a retail voucher worth 20 euro for attending the follow up interview. We did not offer financial compensation for baseline interviews.

At baseline only, we administered the MacArthur Perceived Coercion Scale (MPCS) to measure perceived coercion (10); the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders IV for DSM-IV Axis I disorders; the scales for assessment of positive symptoms and negative symptoms; the Young Mania Rating Scale; the Birchwood Insight Scale; the Beck Depression Inventory and the Beck Hopelessness Scale. At baseline and follow up, we administered the Objective Social Outcomes Index (SIX) (11) to measure objective QoL and the Global Assessment of Functioning (GAF) (12). We administered the subjective QoL items from the Manchester Short Assessment of Quality of Life (MANSA) (13) at follow up only. We collected information regarding admission legal status, admission history, experience of seclusion, forced medication and physical restraint from clinical files.

If there was more than one variable associated with an outcome on bivariate analysis, we performed multivariate analysis to determine a predictive model using SPSS. In the multivariate analysis, we did not include positive or negative symptoms as we assessed these in individuals with psychotic disorders only. Likewise, we

assessed mania in individuals with a diagnosis of schizoaffective or bipolar affective disorder only. For the subjective QoL outcome, we assigned all scores to two groups according to whether they were above or below the median to facilitate clinically meaningful results. We used a cut-off of ±10 on the global assessment of functioning scale to detect clinically meaningful change as the same cut-off has been used in a previous study examining functioning and accumulated coercive events (7). We used the bootstrapping method with bias-corrected confidence estimates and a 95% confidence interval with 5000 samples to test the proposed mediation model.
The accumulated coercive events algorithm was originally used in a Norwegian psychiatric population to calculate all coercive events for each service user (14). The total score was obtained by scoring each coercive event as one unit across three domains. We modified the original algorithm for use within an Irish psychiatric population as follows: legal status (voluntary = 0, involuntary = 1), perceived coercion (0-2 on MPCS = 0, 3-5 on MPCS = 1), physical coercion (each episode of physical restraint, forced medication or seclusion = 1).

Results

A total of 31 (14%) eligible participants declined consent during admission. Of the 162 individuals that were interviewed during admission, 100 (62%) were interviewed one year after discharge. Table 1 describes participant characteristics.
The number of accumulated coercive events during admission ranged from 0-22 (Mean=2±3). A total of 52 (32%) participants scored zero, 41 (25%) scored one and 69 (43%) scored two or more. A higher number of accumulated coercive events were associated with the following factors during admission: psychotic disorder (U =2398.5, p =.003), less insight (r_s =-.266, p=.001), fewer depressive symptoms (r_s =-.343, p<.001), less hopelessness (r_s =-.244, p=.006) and poorer global functioning (r_s =-.542, p<.001). Higher levels of positive symptoms were associated with more coercive events in individuals with a psychotic disorder (r_s =.547, p<001). Higher levels of mania were associated with more coercive events in individuals with bipolar affective or schizoaffective disorder (r_s =.523, p<.001). Multivariate analysis showed that the odds for more coercive events were 5% lower per unit increase in the level of functioning during admission (OR =.95, 95% C.I. = .90-.99).
The mean global assessment of functioning score was 40 ± 13 during admission and 62 ± 19 one year after discharge. Functioning between admission and one year after

discharge declined in 7 (8%), remained the same in 20 (22%) and improved in 64 (70%) individuals. Improved global functioning was associated with the following factors during admission: employment (χ^2= 6.4, df=2, p=.041.), higher objective QoL (χ^2=17.14, df=8, p=.029), fewer depressive symptoms (χ^2= 7.09, df=2, p=.029), more accumulated coercive events (χ^2=8.04, df=2, p=.018) and lower levels of functioning (χ^2=8.13, df=2, p=.017). Higher levels of positive symptoms were associated with improved functioning in individuals with a psychotic disorder (χ^2=9.77, df=2, p=.008). Higher levels of mania were associated with improved functioning in individuals with bipolar affective or schizoaffective disorder (χ^2= 7.19, df=2, p=.027). Multivariate analysis showed that higher objective QoL and lower global functioning during admission reliably predicted improved global functioning one year after discharge. The odds for improved functioning one year after discharge was 90% higher per unit increase in the objective QoL scale during admission (OR = .9, 95% C.I. = .8-.99) and 2.59 times higher per unit decrease on the global assessment of functioning scale during admission (95% C.I. = 1.2- 5.58).

The SIX median score was 4 (IQR = 2) during admission and 3 (IQR = 1) one year after discharge on an ordinal scale of 0-6. Objective QoL between admission and one year after discharge declined in 34 (41%), remained the same in 36 (44%) and improved in 12 (15%) individuals. Improved objective QoL one year after discharge was associated with more depressive symptoms during admission (χ^2 = 7.29, df =2, p =.026).

The mean subjective QoL (MANSA) score was 57 ± 10 on a scale from 12-84 one year after discharge. Higher levels of subjective QoL were associated with less depressive symptoms (U=-1.992, p=.046) and hopelessness (U=-2.594, p=.009) during admission.

Accumulated coercive events were not related to change in objective QoL between admission and one year after discharge (χ^2 = 2.589, df =2, p =.274) or to level of subjective QoL one year after discharge (U= .921, p=.151). Higher levels of accumulated coercive events during admission was associated with improved functioning one year after discharge (χ^2=8.04, df=2, p=.018). However, this association lost significance in the multivariate analysis. Functioning during admission did not mediate the relationship between accumulated coercive events

during admission and functioning one year after discharge (B = .021, 95% CI=.0-.06, p=.0529).

Discussion

The main findings were that lower global functioning reliably predicted more coercive events. One year after discharge, subjective QoL was 63% of the highest possible score, objective QoL improved for 15% and global functioning improved for 70% of individuals. Accumulated coercive events did not predict these outcomes.

A strength of this study is that we examined variables and outcomes that have not been included in previous studies that measured accumulated coercive events (7, 14). A limitation of this study is that our sample may be biased because we had a low completion rate for some measures and we could not include individuals with first episode psychosis.

Previous research also found a decline in objective QoL after functional improvement one year after discharge (9). We hypothesise that this paradoxical finding could be due to social exclusion. For example, service users may not gain employment despite their improved functioning one year after discharge due to disability related employment history gaps.

The finding that accumulated coercive events did not predict functional improvement could be explained by an assumption that all service users received the appropriate treatment. It could be that coercion facilitated the administration of treatment in individuals who refused treatment but lacked capacity due to their mental disorder. If coercion was not used these individuals could have had worse outcomes one year after discharge. An alternative hypothesis is that functional improvement occurred independently of treatment because extreme values tend towards the average when they are measured a second time (15).

Conclusion

Coercive events are unfortunately common during psychiatric admission and appear to be unrelated to functioning and quality of life one year after discharge.

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Table 1: Participant Characteristics				
Characteristic	**During admission**		**One year after discharge**	
	N	%	N	%
Gender				
Male	87	54		
Female	75	46		
Age (years)				
Total	43 ± 14			
Male	40 ± 12			
Female	47 ± 15			
Employment status				
Unemployed (SIX = 0)	102	63	68	68
Voluntary, protected or sheltered work (SIX = 1)	8	5	9	9
Competitive employment (SIX = 2)	52	32	23	23
Accommodation				
Homeless, 24h supervised or permanently in hospital (SIX = 0)	0	0	3	3
Sheltered or supported accommodation (SIX = 1)	9	6	13	13
Independent accommodation (SIX = 2)	137	94	84	84
Partnership / Family				
Living alone (SIX =0)	66	43	41	41
Living with partner or family (SIX=1)	88	57	58	59
Friendship				
Not meeting a friend within the last week (SIX =0)	26	17	28	29
Meeting at least one friend in the last week (SIX =1)	126	83	69	71
Diagnosis				
Psychotic disorder	75	46		
Affective or anxiety disorder	87	54		
Coercive events				
Total involuntary	79	49		
Converted from voluntary to involuntary	25	15		
Physical restraint	27	17		
Seclusion	22	14		
Forced medication	20	12		
Any physical coercion	34	21		

Characteristic	**During admission**		**One year after discharge**	
	N	%	N	%
High perceived coercion	96	59		
Accumulated coercive events scores				
0	52	32		
1	41	25		
2	35	22		
3	12	7		
4	3	2		
5+	19	12		
Clinical Characteristics				
Perceived coercion [A]	3 ± 2			
Objective quality of life[B]	Md = 4		Md = 3	
Global functioning [C]	40 ± 13		62 ± 19	
Insight[D]	9 ± 3			
Positive symptoms[E]	8 ± 4			
Negative symptoms[F]	5 ± 5			
Mania[G]	28 ± 17			
Depressive symptoms[H]	17 ± 14			
Hopelessness[I]	6 ± 6			
Subjective quality of life[J]			57 ± 10	

A. Possible scores range from 0 to 5, with higher scores indicating greater perceived coercion.
B. Possible ranked scores range from 0 to 6, with higher scores indicating better objective QoL. Data was available for 137 (85%) participants at baseline and 96 (59%) at follow up. There were no significant differences between the 82 (51%) individuals who completed SIX during admission and one year after discharge and those who did not in terms of any participant characteristics during admission.
C. Possible scores range from 0 to 100, with higher scores indicating better global functioning. Data was available for 157 (97%) participants at baseline and 94 (58%) at follow up. There were no significant differences between the 91 (56%) individuals who completed GAF during admission and one year after discharge and those who did not in terms of any participant characteristics during admission.
D. Possible scores range from 0 to 12, with higher scores indicating greater insight.
E. Administered to 68 (91%) participants out of 75 with a psychotic disorder only. Possible scores range from 0 to 20, with higher scores indicating more severe positive symptoms.
F. Administered to 69 (92%) participants out of 75 with a psychotic disorder only. Possible scores range from 0 to 20, with higher scores indicating more severe negative symptoms.
G. Administered to 48 (80%) participants out of 60 with bipolar affective or schizoaffective disorder only. Possible scores range from 0 to 60, with higher scores indicating higher levels of mania.

H. Possible scores range from 0 to 63, with higher scores indicating more depressive symptoms.
I. Possible scores range from 0 to 20, with higher scores indicating more hopelessness.
J. Possible scores range from 12 to 84, with higher scores indicating greater satisfaction with QoL. There were no significant differences between the 94 (58%) individuals who completed MANSA one year after discharge and those who did not in terms of any participant characteristics during admission.